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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,604	03/17/2004	Shigenobu Mitani	50049-043	4187
7590	12/06/2006		EXAMINER KIM, PAUL D	
Stephen A. Becker McDERMOTT, WILL & EMERY 600 13th Street, N.W. Washington, DC 20005-3096			ART UNIT 3729	PAPER NUMBER

DATE MAILED: 12/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/801,604

Applicant(s)

MITANI, SHIGENOBU

Examiner

Paul D. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) 3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/17/04, 4/12/06</u> | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This office action is a response to the restriction requirement filed on 9/25/2006.

#### ***Response to the Restriction Requirement***

1. Applicant's election of Group I, claims 1 and 2, in the reply filed on 9/25/2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claim 3 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 9/25/2006.

#### ***Specification***

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: --A METHOD OF MANUFACTURING A SPEAKER--.

#### ***Claim Objections***

4. Claims 1 and 2 are objected to because of the following informalities:

Re. Claim 1: The phrase "its periphery fixed to the bobbin" as recited in line 9 is not clear as to what the "its periphery" is indicated. Examiner assumes that the "its periphery" appears to be --an inner periphery of the spider--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (US PT. 6,993,146) in view of Kan et al. (US PGPub 2003/0043728 A1).

Sato teaches a process of manufacturing a speaker comprising steps of: fixedly putting together a magnet (3), a pot yoke (2) and a pole piece (4) as shown in Fig. 1; fixing an outer periphery of the spider (11) to an inner circumference of a frame (5), wherein an inner periphery the spider is fixed to a bobbin (7); fixing an outer circumferential edge of a surround (6) to the frame, wherein an inner circumferential edge of the surround is fixed to an outer periphery of a diaphragm (8) whose an inner periphery is fixed to the bobbin; and connecting both ends of each of tinsel leads respectively to terminations of a voice coil (9) and to terminals (13) as shown in Fig. 1 (see also col. 4, line 31 to col. 6, line 67).

However, Sato fails to teach an ultrasonic complex vibration welding to fix the component as set forth above. Kan et al. teach a process of making an electrical component including a process of an ultrasonic complex vibration welding including respective opposing inward surfaces of two components (17 and 25) to be fixed together are brought into contact with each other and positioned relative to each other, and then that ultrasonic vibrations oriented in different directions are simultaneously provided to the inward surfaces while a load (or pressure) is applied to one of outward surfaces (such as a flange (26) of objective lens (17) as shown in Fig. 4) defined by the two components in a direction vertical to the inward surfaces. By a complex action of the pressure and the ultrasonic vibration, the protrusions (27) are melted so that the respective opposing inward surfaces of two components (17 and 25) are fixed as shown in Fig. 4 (see also paragraph [0034]). Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify a process of fabricating a speaker of Sato by using an ultrasonic complex vibration welding as taught by Kan et al. in order to enhance the bonding strength between the two components.

7. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hecht et al. (US PT. 4,566,178) in view of Kan et al. (US PGPub 2003/0043728 A1).

Hecht et al. teach a process of manufacturing a speaker comprising steps of: fixedly putting together a magnet (12), a pot yoke (11 and 16) and a pole piece (27) as shown in Fig. 3; fixing an outer periphery of the spider (15) to an inner circumference of a frame (10), wherein an inner periphery the spider is fixed to a bobbin (14); fixing an

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outer circumferential edge of a surround (19) to the frame, wherein an inner circumferential edge of the surround is fixed to an outer periphery of a diaphragm (17) whose an inner periphery is fixed to the bobbin; and connecting both ends of each of tinsel leads (24) respectively to terminations of a voice coil (13) and to terminals (25) as shown in Fig. 2 (see also col. 2, line 51 to col. 3, line 42).

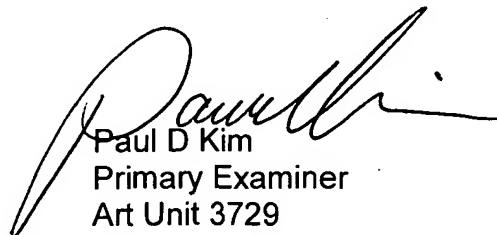
However, Hecht et al. fail to teach an ultrasonic complex vibration welding to fix the component as set forth above. Kan et al. teach a process of making an electrical component including a process of an ultrasonic complex vibration welding including respective opposing inward surfaces of two components (17 and 25) to be fixed together are brought into contact with each other and positioned relative to each other, and then that ultrasonic vibrations oriented in different directions are simultaneously provided to the inward surfaces while a load (or pressure) is applied to one of outward surfaces (such as a flange (26) of objective lens (17) as shown in Fig. 4) defined by the two components in a direction vertical to the inward surfaces. By a complex action of the pressure and the ultrasonic vibration, the protrusions (27) are melted so that the respective opposing inward surfaces of two components (17 and 25) are fixed as shown in Fig. 4 (see also paragraph [0034]). Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify a process of fabricating a speaker of Hecht et al. by using an ultrasonic complex vibration welding as taught by Kan et al. in order to enhance the bonding strength between the two components.

**Conclusion**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul D. Kim whose telephone number is 571-272-4565. The examiner can normally be reached on Monday-Thursday between 6:00 AM to 2:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Paul D Kim  
Primary Examiner  
Art Unit 3729